International Journal of Transgenderism

This is an Accepted Manuscript of an article published by Taylor & Francis in International Journal of Transgenderism on 26 Aug 2016 http://dx.doi.org/10.1080/15532739.2016.1216345

Prevalence of Pregnancy Involvement Among Canadian Transgender Youth and its Relation to Mental Health, Sexual Health, and Gender Identity

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DOI: 10.1080/15532739.2016.1216345

ABSTRACT: While little research has been conducted into the reproductive experiences of transgender people, available evidence suggests that like cisgender people, most transgender people endorse a desire for these experiences. This study explores the pregnancy experiences and related health factors among transgender and gender-diverse 14–25 year olds using a national Canadian sample (*N* = 923). Results indicated that 26 (5%) transgender youth reported a pregnancy experience in the past and the prevalence among 14-18 year olds was comparable to population-based estimates using the same question in the British Columbia Adolescent Health Survey. Transgender youth with a history of pregnancy involvement reported a diverse range of gender identities, and this group did not differ from the remainder of the sample on general mental health, social supports, and living in felt gender. This group did report over six times greater likelihood of having been diagnosed with a sexually transmitted infection by a doctor (19%), but did they not differ in reported contraception use during last sexual intercourse. These findings suggest that pregnancy involvement is an issue that should not be overlooked by health professionals working with transgender youth and that this group has particular sexual health needs.

KEYWORDS: pregnancy, youth, transgender, hormones, sexual health

Little is known about the reproductive experiences of transgender and gender diverse people and even less is known about this among transgender and gender diverse youth specifically. It is known that physical transitions that transgender people undertake through hormonal and surgical interventions generally disrupt their reproductive functioning (De Sutter, Kira, Verschoor, & Hotimsky, 2002). Those who take puberty blockers (in early adolescence) and then gender-affirming hormones (in later adolescence) may never develop the ability for any reproductive capacity. Generally, this loss of fertility resulting from hormone blockers, hormones, and surgeries has been considered the "price to pay" for transition (Meyer et al., 2001, De Sutter et al., 2002).

Medical perspectives of transgender people describe the distress and discomfort that they have with their reproductive and sexual bodies, or *gender dysphoria* (American Psychiatric Association, 2013). From this perspective, it might be expected that transgender people would not want to engage in sexual activities that would result in them becoming pregnant or inseminating someone else. We know, however, that it is not uncommon for transgender people to report a history of being pregnant or getting someone else pregnant prior to their transition. Also, evidence suggests that the desire for children is common among transgender individuals at similar rates to cisgender people (i.e. those whose gender identity is concordant with the gender they were assigned at birth) (T'Sjoen et al., 2013). In a survey of 121 transgender women from eleven countries, De Sutter et al. (2002) observed that among those with no children, 40% would like to have their own biological children one day, while among those with children, half of them would like to have children again. Most of the study's participants (77%) felt sperm freezing should be discussed and offered by healthcare providers to all trans women before the onset of hormonal treatment. Just as recent advances in reproductive techniques are helping to fulfill the reproductive needs of postmenopausal women, infertile heterosexual couples, and same-sex couples, fertility options for trans people are increasingly being explored (Murphy, 2010).

Because transgender people are sometimes required to undergo medical procedures that remove their reproductive capacity (i.e., hormones or surgery) in order to get access to legal documentation that aligns with their gender, human rights advocates have argued that transgender people should retain their rights to reproduction when accessing appropriate legal documentation (Nixon, 2013).

In spite of the manifest reproductive intentions and ability of many trans people, very few studies have been conducted examining the health and wellbeing of parents who are trans (e.g., De Sutter et al., 2002; Light et al., 2014). No study has looked specifically at the sexual and reproductive experiences of trans and gender variant youth, nor have any studies examined contraceptive use and sexual health among trans youth who have had a history of pregnancy involvement. This is troubling because clinicians and policymakers are missing a vulnerable population in their design and implementation of sexual and reproductive health care practices, sexual health education, sexual health policies, and

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pregnancy support services. Studies have shown that transgender youth are at high risk for experiencing a wide range of discrimination, harassment, and exclusion (Kosciw, Diaz, & Greytak, 2008). A study of the school experiences of 108 Canadian trans high school students found around three quarters reported feeling unsafe at school and having been verbally harassed about their gender expression, and 37% had been physically harassed or assaulted because of their gender expression (Taylor et al., 2010). This suggests that transgender youth may be vulnerable to emotional distress as a result of such harassment—a situation that could adversely affect their sexual health behaviors.

It is therefore important to understand the sexual and reproductive health issues of transgender and gender variant youth, including pregnancy involvement. The purpose of this study is to explore the health of trans youth who reported experiences with pregnancy involvement. We report the support resources, living arrangements, sexual health, and mental health outcomes for this group.

Method

Sample

Our data come from the Canadian Trans Youth Health Survey, a large online survey open to people identifying as trans or genderqueer, currently living in Canada, aged 14-25, who were able to read and respond to the survey in English or French. Transgender youth were asked about a wide range of health-related topics. The survey was conducted from October 2013 to May 2014. Participants (N = 923) were recruited through youth advisory councils (YACs), community organizations, health professionals, social media, and word of mouth. To recruit, we utilized social media sites such as Facebook and Twitter, networks of YACs and study investigators from across the country, and networks of LGBTQ youth organizations across Canada. In addition, we approached clinical services and health care providers in several provinces that work with trans and gender diverse youth and some of these service providers shared the survey with their clients.

Youth participated in the survey from every province and territory in Canada except for the Yukon and Nunavut. Most participants lived in either Ontario (29%) or British Columbia (23%) and many were from Québec (15%) and Alberta (12%).

A minority of participants (14%) were born outside of Canada and 2% were recent immigrants. More than three quarters (76%) of the sample spoke English only at home, 7% spoke French only, and 7% spoke both English and French at home. Similarly, 7% of the sample took the survey in French. Nearly three-quarters (74%) of the sample identified as White, and nearly 1 in 10 identified as Aboriginal. For more details of the sample, see Veale et al., (2015).

Measures

There were different versions of the questionnaire for younger (14-18 year old) and older (19-25 year old) youth. Most items used in the survey were drawn from existing population-based adolescent health surveys, such as the British Columbia Adolescent Health Survey (see Saewyc, Konishi, Rose & Homma, 2014) or health surveys participated in by young adults, such as the Canadian Community Health Survey (Cui, Shooshtari, Forget, Clara, & Cheung, 2014).

Pregnancy Involvement

To assess pregnancy involvement, an item asked youth, *How many times have you been pregnant or gotten someone pregnant?* Response options were *0 times*, *1 time*, *2 or more times*, or *not sure*. Participants who had never had sex (n = 111) skipped the question. Older participants were also asked whether or not they were currently pregnant.

Sexual Health

Participants were asked if they had *ever had genital sex (i.e. vaginal or front hole sex)*. If they answered yes to this, they were asked what one contraceptive method they had used the last time they had had sex. Most participants responded with an effective contraception technique (e.g., condoms, birth control pills), and those who responded to this question with *No method was used to prevent pregnancy* or *Withdrawal* were coded as having used an ineffective contraceptive technique. Participants were also asked if they had been told by a doctor or nurse that they had a sexually transmitted infection.

Gender Transition Questions

Participants were asked if they were currently living in their felt gender part-time or full-time. They were also asked if they had *ever taken hormones for trans-related reasons*.

Mental Health

Participants were asked how they would describe their mental health in general. Response options were *Excellent*, *Good*, *Fair*, and *Poor*.

Social Supports

Older participants were asked, *How often is each of the following kinds of support available to you if you need it?* Twelve items that assessed social support were summed together; an example of an item was, *Someone to help you if you were confined to bed?* Responses options were 0 (*None of the time)*, 1 *(A little of the time)*, 2 *(Some of the time)*, 3 *(Most of the time)*, and 4 (*All of the time)*. Scores ranged from 0 to 48 (alpha = 0.92), where higher scores indicated more social support (see Giesfield, Greeno, & Kim, 2008 for an overview on the 12-item Medical Outcome Study Social Support Survey measure). Participants were also asked who lives with them in their main home.

Procedure

The study received ethics approval from several university ethics boards across Canada. Data analyses were conducted using SPSS version 22. Frequency differences between groups were assessed using crosstabulations and χ^2 tests.

Results

Pregnancy Involvement

Five hundred and forty trans youth responded to the question asking about pregnancy involvement and a further 111 skipped this question because they reported they had never had sex. Of these, 26, reported pregnancy involvement at least once: 22 youth (3%) reported involvement one time and 4 youth (1%) reported two or more times. Five youth (1%) answered that they were not sure.

In terms of the living arrangements for trans youth with a history of pregnancy involvement, half (50%) reported living with roommates, a minority reported living with their partners as parents (17%), and 13% lived alone.

Younger trans youth (14-18 year olds) were less likely (2%) to have reported a history of pregnancy involvement than older (19-25 year old) participants (5%). Comparing to population-based estimates of pregnancy involvement among the general population, the 2013 British Columbia Adolescent Health Survey asked the same question: It was estimated that 1% of the British Columbia adolescent population had a history of pregnancy involvement and this rate was 5% among those who had ever had sexual intercourse (Smith et al., 2014). In comparison, 4 out of 237 (2%) younger trans youth in our sample had ever been pregnant or made someone pregnant and this number was 6% (4 out of 88) among those who had ever had genital sex.

Over half of trans youth who reported a history of pregnancy involvement reported that they had ever taken gender-affirming hormones (58%). Only one of the 418 older participants who responded to the pregnancy question reported they are currently pregnant, and three (1%) reported they were not sure.

Gender Identities

The youth who reported pregnancy involvement reported a diverse responses range of gender identities. In response to a gender identity question in which participants could check multiple boxes, nearly half (48%) reported they identified as a boy or man, 36% of the sample identified as a trans boy or trans man, 8% identified as a girl or woman, 12% as a trans girl or trans woman, 12% as Two-spirit, 32% as genderqueer, and 16% as gender-fluid.

Differences Among Those Reporting Pregnancy Involvement

We compared transgender youth reporting pregnancy involvement with the remainder of the sample on a variety of health experiences. Results of these comparisons are presented in Table 1. As outlined in the table, almost 1 in 5 transgender youth with a history of pregnancy involvement reported ever being told they had an STI, significantly higher than the less than 1 in 30 transgender youth without a history of pregnancy involvement. There were no significant differences between the groups though in hormone use, living in felt gender, overall self-reported mental health, and level of social support.

Discussion

Among our large Canadian sample, we found that nearly 1 in 20 trans youth reported at least one experience of pregnancy involvement. This rate of pregnancy involvement seems to be about the same as the general population. The best population-based comparisons available were from adolescents in British Columbia (Smith et al., 2014), and these were at comparable levels to those reported among adolescents our national sample (1-2%). This finding may be surprising to some because it might be assumed that trans youth have fewer experiences with pregnancy compared to cisgender youth due to hormone and/or surgical treatments reducing or eliminating fertility. Health professionals

Table 1 Comparisons between trans youth with and without a reported history of pregnancy involvement.

				Pregnancy involvement *n* (%)	
	χ^2	*df*	*p*	Yes	No
Ever had an STI	48.08	2	< .01		
Yes				5 (19%)	20 (3%)
No				19 (73%)	484 (97%)
Don't Know				1 (8%)	2 (0%)
Contraception use	1.69	3	.64		
Effective				10 (77%)	116 (73%)
Ineffective				1 (8%)	15 (9%)
Not Sure				1 (8%)	25 (15%)
None Used				1 (8%)	4 (3%)
Ever taken hormones	0.70	1	.40		
Yes				15 (58%)	213 (34%)
No				11 (42%)	407 (66%)
Living in felt gender	2.53	2	.28		
Yes, full-time				15 (60%)	220 (48%)
Yes, part-time				7 (28%)	164 (36%)
No				3 (12%)	72 (16%)
Mental health	1.38	3	.71		
Excellent				0 (0%)	16 (3%)
Good				4 (16%)	114 (22%)
Fair				13 (52%)	231 (45%)
Poor				8 (32%)	141 (31%)
Social Support	$t = 2.39$	409	.12[a]	26.41[b]	29.14[b]

Note: [a] denotes the use of a two-tailed *t*-test; [b] denotes the mean value of Social Support

may also make assumptions about trans people only being interested in having sex with people assigned the same sex at birth as them (with whom pregnancy involvement would not be biologically possible). The results of our study, however, provided no evidence that this is actually the case. These findings mirror those of studies that have examined the prevalence of pregnancy experiences among lesbian, gay, and bisexual youth which have found these are at the same level or even higher than for heterosexual youth (Herrick, Matthews, & Garofalo, 2010; Saewyc, Bearinger, Blum, & Resnick, 1999; Saewyc, Poon, Homma, & Skay, 2008), despite pregnancy involvement also likely to be overlooked by health professionals working with these groups.

Trans youth who reported a history of pregnancy involvement reported a wide range of gender identities. The distribution of these gender identities was very similar to that reported in the wider sample (Veale et al., 2015). This study did not find any differences in whether those with a history or pregnancy involvement reported living in their felt gender or whether they were taking hormones, suggesting that assumptions that these experiences only occur in those who are yet to transition are likely to be unfounded. We also did not see any difference between trans youth with and without a history of pregnancy involvement in reported mental health and social supports. Overall, these findings suggest that, like with cisgender youth, pregnancy involvement among trans youth occurs across a diverse range of the population.

In addition, in our sample, almost 1 in 5 trans youth who reported a history of pregnancy involvement reported that they had ever been told they had a STI. This was more than six times the rate of those who had never reported pregnancy involvement. While no significant differences emerged on contraception use between these groups, these findings indicate that sexual health needs are very important for trans youth with a history of pregnancy involvement.

A major strength of our study was the large sample size with the inclusion of participants from every province and territory in Canada except for the Yukon and Nunavut. This was the first study to make comparisons between transgender young people with a history of pregnancy involvement and those without. We were able to make these comparisons on both general health and transgender-specific measures.

Limitations and Future Directions

Though we collected data from transgender participants from

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across Canada, we utilized a convenience online sampling framework, meaning our data may not be representative of the Canadian transgender population. A limitation of quantitative data research is the lack of depth in description of the experiences of participants. In this study, we did not assess any of the reasons or contexts of the pregnancy involvement among this sample. Interesting questions for this group would be what stage of transgender identity development this pregnancy involvement occurred at and what the circumstances of the pregnancy were (e.g., whether it was from assault or consensual, accidental or wanted).[1] Another limitation of this study is that we only asked participants if they had *ever* taken gender-affirming hormones. This meant that we were not able to assess whether this pregnancy involvement occurred prior to the participant taking hormones or whether the participant had been taking gender-affirming hormones at the time of the pregnancy involvement. Clearly, more research is needed into the past or current hormone usage in transgender people who report pregnancy involvement using clinical samples of youth and young adults, rather than community samples that cover a wide array of topics in brief (Feldman et al., 2016). Given the small number of participants who reported that they were *currently* pregnant, our findings suggest that most of the transgender youth in our sample who reported a history of pregnancy involvement had this involvement occur in their past. Finally, with 26 transgender youth reporting a history of pregnancy involvement in our sample, this study had limited power to detect group differences.

This study has implications for healthcare practitioners who work with transgender youth. Health practitioners may be likely to overlook the issue of pregnancy involvement when providing care to transgender youth because of assumptions that this group will not be engaging in activities that will result in pregnancy involvement. Pregnancy involvement was reported among Canadian transgender youth with a wide range of gender identities and transition experiences and this group also appears to have important sexual health needs. Because the relationship between healthcare providers and transgender youth has traditionally been a *gatekeeper* approach (Shield, 2007), transgender youth may be understandably reluctant to discuss having been pregnant or made someone pregnant as these things are traditionally understood to be contradictory to a desire to gender transition. Health care providers may also be reluctant to talk about these topics with their patients/clients for these reasons too, but the findings of this study suggest that these assumptions are likely to be false.

Health care providers should ensure that youth have received, and understand, basic sexual health information about how pregnancy can occur, and the various hormonal and barrier methods can be used to prevent pregnancy. It is possible that youth did not actually receive adequate sexual health education at school, as many schools provide extremely limited content around sex education, and even the general population of students demonstrates significant gaps in knowledge about sexual health among Canadian high school students (Kumar et al., 2013). For transgender youth who are experiencing significant gender dysphoria, content about pubertal development and sexual practices is usually provided in a binary gender framework, and focuses on genitals that transgender youth may actively want to avoid thinking about. As a result, transgender youth they may not attend the class, or may not absorb the information in a general class. Health care providers can offer a gender-affirming approach to the sexual health information, paying attention to avoid gendered terms, using terminology that does not directly link genital parts to a specific gender, i.e., saying "people with a penis" instead of "young men with a penis." It is also important to remind youth that gender-affirming hormones might not eliminate their ability to cause pregnancy or to become pregnant, and to help them choose among different barrier methods to prevent unintended pregnancy if they are engaging in sexual behaviors. This has the added benefit of protecting against sexually transmitted infections. To our knowledge, this is the first study to document the prevalence of pregnancy involvement among transgender youth, and to further examine the health issues of transgender young

people who have been involved in a pregnancy. According to the WHO, all young people have a right to sexual and reproductive health. Transgender and gender variant youth have as much need of appropriate sexual health education and supportive health care as their cisgender peers, yet the barriers they face to gender-affirming health care may create barriers to disclosure of sexual risks. Clinicians should consider the sexual and reproductive health needs, in addition to other health needs, when providing care for trans and gender variant youth.

Acknowledgements

The authors acknowledge funding support for this research from the Canadian Institutes of Health (MOP 119472) awarded to Dr. Elizabeth Saewyc at the University of British Columbia. We acknowledge our study co-investigators and research team from across the country and give special thanks to the Trans Youth Advisory Councils, to the LGBTQ youth-serving agencies and clinical services who spread the word, and to all survey participants

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Footnote

[1] We thank an anonymous reviewer for suggesting to assess circumstance.